



**Fulton County
Government**

2019

**SUSTAINABILITY PLAN
+ RESILIENCE**



SUSTAINABILITY PLAN + RESILIENCE

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LETTER FROM THE BOARD OF COMMISSIONERS

Fulton County's geographic vistas and beautiful natural resources lie in north-central Georgia at the foothills of the Appalachian Mountains. The warm southern climate makes this area a vibrant, enjoyable region that produces rich hardwood and pine forests. Fulton County encompasses 528.7 square miles stretching over 70 miles from end to end. The Chattahoochee River serves as the source of drinking water for most of Fulton County, beginning its passage from the north Georgia mountains where trout are plentiful. Preserving these breathtaking natural resources, including our economic and social stature, now and in the future is the collective vision we have for our communities. Sustainability begins by developing a collective idea of what we want to be, then taking actionable steps toward making that vision a reality for all, making Fulton County one of the best places to live, work and visit.

Fulton County is home to 15 municipalities and the unincorporated Fulton Industrial District. These locales offer diverse economies, outstanding communities and exceptional quality of life. The county is the economic powerhouse of the Southeast. Fulton County is the political and commercial capital of one of the fastest developing states in the U.S. Our greatest resource is the diverse, creative people whose rich history has been the difference in making this region a great place to call home. Our top priority is to lead a path of transformation, enhancing sustainability and resilience during the next five years and beyond. We are making sustainability and resilience a reality in Fulton County where all can thrive and be a legacy for the future.

We welcome your input on the delivery of this plan and the services we provide.

Sincerely,

Robert L. Pitts
Chairman At Large

Lee Morris
Vice Chairman, District 3

Liz Hausmann
District 1

Bob Ellis
District 2

Natalie Hall
District 4

Marvin S. Arrington Jr.
District 5

Vacant
District 6



Six Priority Areas Driving Sustainability + Resilience

SUSTAINABILITY IS...

- | | |
|---|---|
| 1. CLIMATE CHANGE MITIGATION | Driving energy efficiency while identifying and implementing renewable energy opportunities. |
| 2. SOCIAL EQUITY & SMART TRANSIT | Encouraging clean energy transportation and advancing community efforts promoting self-sufficiency through resident engagement. |
| 3. HIGH-PERFORMANCE COUNTY INFRASTRUCTURE | Improving recycling and waste diversion efforts while utilizing building automation systems to improve maintenance strategies. Continuously improving water quality and efficiency initiatives. |
| 4. EDUCATION, OUTREACH & GREEN JOBS TRAINING PLACEMENT | Supporting green jobs, workforce development and training, and promoting educational programs teaching sustainable practices to Fulton County citizens. |
| 5. FOSTERING PARTNERSHIPS | Partnering with our cities, organizations and businesses to support environmental justice and sustainable practices in Fulton County. |
| 6. BUDGETARY APPROPRIATION | Identifying products, grants and programs designed to promote sustainability and driving utility cost savings through efficiency. |

HOW CAN GOING GREEN BENEFIT YOU?



COMBATS
CLIMATE CHANGE



HELPS PREVENT
ILLNESS



BOOSTS THE
ECONOMY



IMPROVES THE
JOB MARKET

A Pledge to Sustainability + Resilience

Building sustainably in the context of resilience requires multifaceted commitments, and starts by identifying civic challenges then matching them with solutions that lead Fulton County from its existing strategic plan to the current Sustainability + Resilience Plan. The county embarked upon an extensive public outreach campaign in preparing its 2016-2019 Strategic Plan in six priority areas: “All People” are safe, healthy, self-sufficient, have economic and cultural opportunities, and trust their government. Public outreach, key stakeholder feedback, and the experience of employees across multiple departments and levels within Fulton County government will inform, promote and manage sustainable practices in county facilities.

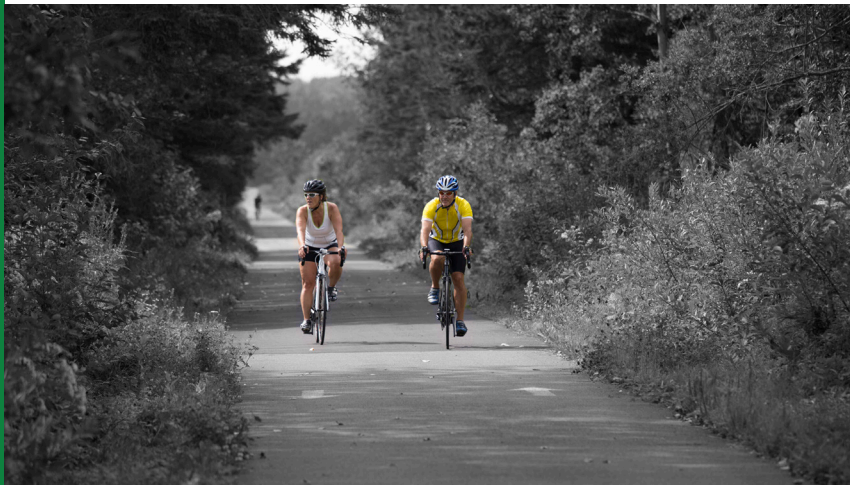
Sustainable living denotes meeting current needs without compromising the ability of future generations to meet their own needs. Resilience means surviving, adapting, and growing regardless of the physical, social, and economic long-term chronic climate stresses and shorter-term acute climate shocks experienced by individual communities (especially the poor), institutions, businesses, and systems within the county. Climate stressors weaken the fabric of a county on a day-to-day or cyclical basis (e.g., rising sea levels, increased temperatures, chronic food and water shortages). Climate shocks

are sudden sharp events that threaten a county (e.g., wildfire, tornado, hurricane, drought, earthquakes, floods, disease outbreaks and terrorist attacks).

The Sustainability + Resilience Plan is a living document that will bring together county representatives, citizens, community-based institutions, local business, and local environmental groups working together for an environmentally, economically, and socially sustainable future. A green team, comprised of representatives from key departments, will monitor the county’s environmental policies and practices and provide support in achieving the environmental goals set by the plan. During year three, the committee will lead decisions to reassess sustainability goals.

The 2016-2019 Strategic Plan is the basis for inputs and proposed solutions as it is the document for which the county gathered extensive community input and participation. County commissioners responded based on input they regularly received from constituents. For example, each area of the Sustainability Plan that asks, “What do county residents say success looks like to them?” derives responses expressly from the Fulton County Resident Strategic Planning Citizen Survey. This feedback directly influenced the focus and approach of the plan’s development.





Fulton County's new sustainability action plan embraces a practical, holistic and integrated approach to sustainable development and resilience that county staff and residents can follow and own. The plan provides the blueprint to achieving a better and more resilient future for Fulton County by addressing local sustainability challenges that we face, like those related to climate, equity, partnerships and education.

Vision Statement

To thrive as the premier county in Georgia for sustainability and resilience, protecting residents, visitors and environmental systems.

Mission Statement

To deliver a transformational and straightforward sustainability action plan that incorporates resilience, social, environmental and economic responsibility, allowing residents and visitors to thrive now and in the future.

Protecting Fulton County's Natural Resources

Protecting natural resources—like the main source of drinking water, the Chattahoochee River—is vital because natural resources must continue meeting current needs without compromising the ability of future generations to meet their needs. Accordingly, short-term and long-term impacts of policy goals will be examined to ensure the county's environmental systems will thrive.



STEP 1

A look at where we have been

Performing a comprehensive review of Fulton County Government's current sustainability efforts and goals served as the basis for the development of Fulton County's new plan.

Sustainability in county-owned infrastructure

Fulton County Government has expanded its embrace of sustainability over the last 25 years from entry into the U.S. EPA's Green Light Program that encouraged the use of energy-efficient lighting, to the recent completion of seven LEED Silver Certified and three LEED Gold Certified libraries as well as the registration of 22 existing library projects with USGBC under LEED v3. The county has implemented its own citizens' commission on the environment staffed by volunteers with direct input to county commissioners.

Fulton County's progress toward sustainability has meant advancements like enhanced recycling services in all county buildings and building/renovating new and existing buildings that meet high performance green building best practices, including measurement and verification practices that earn third-party LEED certifications. Green buildings save taxpayer dollars by reducing the county's carbon and water footprints and providing improvements in indoor air quality and sustainable sites with green space.

STEP 2

A look at where we want to go

Interview key departments

Creating an easy to follow Sustainability + Resilience Plan that moves Fulton County Government forward will allow better coordination, documentation, measuring and reporting of progress toward the stated goals.

- Key department leaders and their appointed staff were invited to participate in a two-day sustainability round table, Nov. 15–16, 2018, to understand their current efforts and thoughts involving sustainability and resilience and all related processes.
- Uses of the latest systems and technology to improve sustainability and efficiency were discussed, and the county's current processes used by key departments were documented and are included in the reference section of the Sustainability Action Plan.
- The sustainability team researched and reviewed sustainability plans of other metro-Atlanta counties and national municipalities for baseline development to discover current plans, processes or goals to compare with and to ensure a sustainability and resilience plan that would drive Fulton County as an innovator for the area.

STEP 3

A look at third-party industry standards

By the end of 2018, the sustainability team developed an initial sustainability plan for review by stakeholders and county leadership. Preliminary approval allowed the move toward final development of Fulton County's 2019 Sustainability + Resilience Plan based on research, leadership approval, and comparison to third-party industry standards including:

- **ISO/TC 268, Sustainable development of communities**
International Standards Organization is the world's largest developer of voluntary international common standards that help create products that are safe, reliable, and of good quality. Organizations like ISO have an established set of standardized indicators emphasizing a consistent approach to what is measured and how that measurement is to be undertaken.
- **Smart Cities Council**
Real-world smart city examples are rarely a single city in the strictest term. They are a metropolitan region, a cluster of cities, counties, regional coalitions, districts, neighborhoods, townships, villages, campuses and military bases. Smart Cities Council envisions a world where digital technology and intelligent design have been harnessed to create smart, sustainable communities with high-quality living and high-quality jobs.
- **WalletHub**
There are four key environmental factors for benchmarking and measuring sustainable improvements: Environmental Quality, Eco-Friendly Behaviors, Climate Change Contributions, and Lifestyle & Policy.
- **GE Internet of Things**
The "internet of things" facilitates real-time data that all departments can access at the same time in a cost-effective and scalable manner.¹

Smart governments are analyzing sustainability and resilience as opportunities to consolidate service data into a single repository that enhances transparency through open data initiatives to forecast critical service needs of residents. It is in this way that the internet of things is a crucial component in service delivery as it connects and improves resilience and sustainability. Local governments that start now pursuing digital transformation strategies by leveraging the "internet of things" are those best-positioned to identify and act on data insights to sustainability.

STEP 4

The business case for sustainability

A. Sustainable design and construction can reduce county operating costs by up to 50 percent over the life of a building. The initial capital expenditure of green construction projects is small compared to lifecycle costs (such as operation and maintenance). High-performance green infrastructure can:

- Substantially cut the building's energy consumption and cost.
- Improve occupant health and productivity through better indoor environmental quality.
- Generate on-site renewable energy making them less susceptible to disasters and security threats due to their electrical self sufficiency.
- Reduce the impacts of the "built" environment.
- Create jobs in renewable energy and bio-based product industries reducing reliance on importing.

B. Energy services companies are willing to finance the technological enhancements and allow the county's energy and water savings to pay for the upgrades over time with a performance contract.

C. Green buildings reduce a variety of risks, now being reflected in lower property insurance rates, because they are healthier for occupants by using environmentally friendly building materials, improving indoor air quality, daylighting, green space and focusing on health and wellness.²

D. The credit rating agency Moody's Investors Service alerted U.S. cities and counties to prepare for the effects of climate change or risk being downgraded.



1. Building Blocks for an Extensible Smart City, <https://go.currentbyge.com/2018-Building-Blocks-for-an-Extensible-Smart-City-Webinar-Registration.html?src=2018-Building-Blocks-Webinar-Hub>

2. High-Performance Green Buildings: A Look at their Benefits and the role of Federal policy, <https://www.eesi.org/briefings/view/high-performance-green-buildings-a-look-at-their-benefits-and-the-role-of-f>

Resilience is critical because of the impact it can have on a county's credit rating.

Moody's motivation readies U.S. for resilience planning:

On Dec. 1, 2017, Moody's Investors Service, one of the largest credit rating agencies in the country, warned U.S. municipalities to prepare for the effects of climate change or risk being downgraded. U.S. exposure to economic loss is placing short-term and long-term credit pressure on U.S. states and local governments.

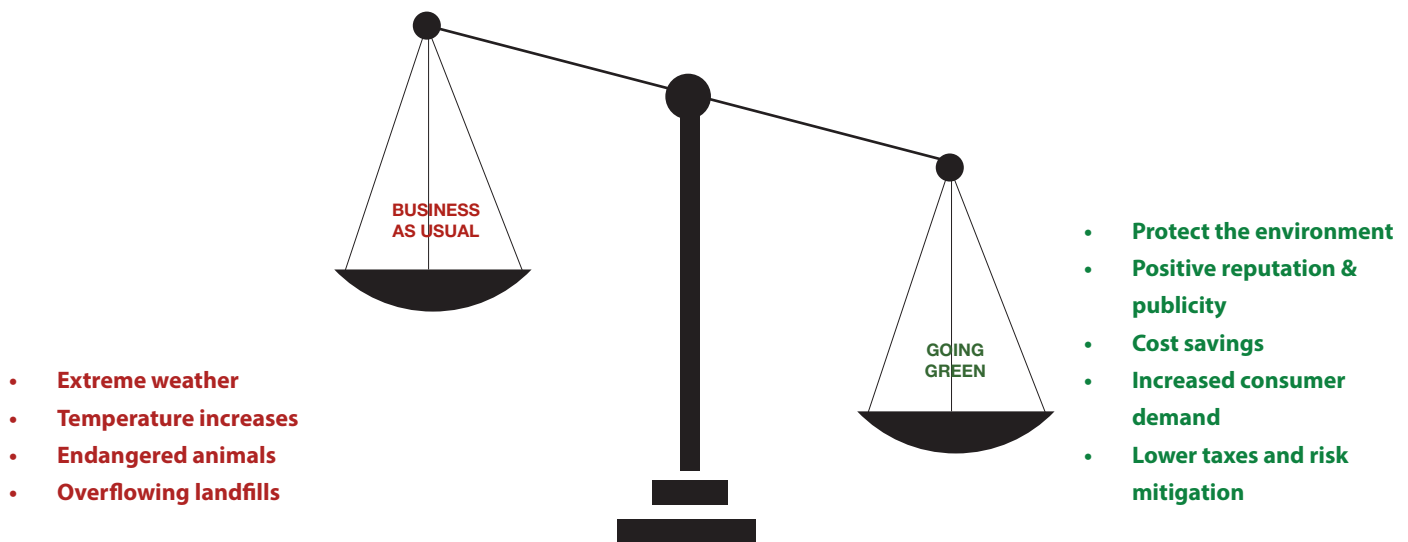
Moody's assesses a municipality's resilience credit risk as being impacted by climate change in two ways:

- a short-term impact as "climate shock" like a wildfire, tornado, hurricane or drought, or
- a longer-term impact as "climate stressors" like rising sea levels or increased temperatures.

These sentiments make clear that resiliency planning is as important as sustainability planning, and ideally, they occur in tandem. Moody's is the first of the country's big three credit rating agencies to publicly outline how it weighs climate change risks into its credit rating assessments.

WHAT'S AT STAKE?

A HIGH LEVEL OVERVIEW



Moody's breaks the U.S. into "climate regions," based on geographically expected risks. The Midwest impacts on agriculture are forecast to be among the most significant economic effects of climate change. The Southwest is projected to become more vulnerable to extreme heat, drought, rising sea levels and wildfires. The Northeast biggest impact is rising sea levels and their effect on coastal infrastructure damage.

During the rating process, analysts are asking communities that face a high risk of being severely impacted by climate change how they are preparing for these risks. Announcements like Moody's are encouraging policymakers to weigh the long term consequences of delaying resiliency planning. "Now we've got the incentive on an annual economic basis to make the smart investments." ³

³ Credit Rating Agency Issues Warning on Climate Change to Cities, <https://www.npr.org/2017/12/01/567843604/credit-rating-agency-issues-warning-on-climate-change>

Primary Objectives of the Strategic Priorities

The objectives are set out to leverage in-house policies that enhance service levels, citizen well-being, sustainability, economic development, and “internet of things” strategies by 2025. Goals will be assigned, measured, given a time frame, budget year, potential funding via grant or budget allocation and one or more pilot projects to implement.

1. **Reduce energy and water consumption** by 20 percent for all county-owned facilities based on the consumption rate for 2018 (baseline year) by year 2025.
2. **Improve air quality** by increasing green spaces on the county’s capital projects; increase alternative fuel vehicle fleet, green commuting alternatives, and safe access to transportation for pedestrians and bicyclists at county sites; increase recycling efforts, composting and alternate disposal options at county buildings and on capital projects by year 2025.
3. **Empower employees and residents with education** through various means of outreach about the county’s sustainability commitment to the environmental and economic benefits of green practices.



Fulton's Six Priority Areas of Sustainability + Resilience

Public education is key to the success of Fulton County's new Sustainability + Resilience Plan. Fulton County leaders bring residents, department heads, elected officials and environmental consultants together to talk about the plan's importance.



1. SUSTAINABILITY IS CLIMATE CHANGE MITIGATION

- Develop renewable energy pilot study project by 2020.
- Improve energy efficiency at Fulton County buildings by 20% by 2025.



2. SUSTAINABILITY IS SOCIAL EQUITY & SMART TRANSIT

- Promote and educate Fulton County residents on local farming programs and community gardening.
- Partner with FGTV to produce "green" programming segments about local practices and healthy foods.
- On new capital construction projects, restore undeveloped brownfields to refreshed green space.
- Strive to improve walkable urban areas and pedestrian/biker safety.
- Increase electric and hybrid vehicle use by Fulton County departments while expanding charging station infrastructure.



3. SUSTAINABILITY IS HIGH-PERFORMANCE COUNTY INFRASTRUCTURE

- Monitor building automation and utility data to continuously improve maintenance strategies
- Continuously improve current water quality initiatives.
- Improve water efficiency at Fulton County buildings by 20% by 2025.
- Analyze then improve recycling and waste diversion by 20% by 2025 at county buildings.
- Establish a focused sustainable component to existing building maintenance programs through:
 - Continuous improvement of building envelope, LED lighting, and HVAC specifications.
 - Preventative maintenance and efficiency checks on older equipment.
 - Implementation of green cleaning and integrated pest management practices



4. SUSTAINABILITY IS EDUCATION, OUTREACH & GREEN JOBS TRAINING/PLACEMENT

- Launch a green jobs workforce development training/placement program on county capital projects.
- Promote educational programs around sustainability, resilience and the internet of things.



5. SUSTAINABILITY IS FOSTERING PARTNERSHIPS

- Create partnerships among staff, cities, organizations, and businesses to support environmental justice and education through the state Health Department.
- Have a public education campaign on the ill effects of poor air quality.
- Discourage use of non-recyclable disposable materials for all county facilities and affiliated events.
- Promote alternative transportation that helps people through the last mile of their destinations.



6. SUSTAINABILITY IS BUDGETARY APPROPRIATION

- Budgetary funds and grants will be critical for the success of the plan.
- Implement green purchasing policies by 2020.

Implementing the Plan

Today, the commissioners envision a county that is sustainable in the context of resilience, a county that will strive to conserve energy at public facilities and use local labor and materials on county projects. This governmental body aims to make investments in infrastructure that will help to build a high-tech, knowledge-based, creative local economy.

		SIX PRIORITY AREAS OF SUSTAINABILITY					
YEAR	TARGETS	CLIMATE CHANGE MITIGATION	SOCIAL EQUITY, SMART TRANSIT	HIGH PERFORMANCE INFRASTRUCTURE	EDUCATION, OUTREACH & GREEN JOBS TRAINING	FOSTERING PARTNERSHIPS	BUDGET APPROPRIATION
1 TO 2	Apply for Grants/Rebates including LCI		X	X			X
	Create Environmental Justice & Educational Partnerships		X		X	X	
	Discourage Usage of Unrecyclable Disposables	X		X		X	
	Implement a Sustainable Building Maintenance Program	X		X			X
	Implement Green Purchasing Policies	X		X		X	X
	Improve Building Automation Strategy & Utility Monitoring	X		X		X	X
	Launch Green Jobs Workforce Development & Placement Program		X			X	
	Program Education on Sustainability, Resilience, and the Internet of Things		X		X	X	
	Promote Local Farming and Community Gardening Programs		X		X	X	
	Promote a Last Mile Initiative & Sustainable Commuting	X	X	X	X	X	X
	Support Indoor Air Quality Education Campaign		X		X	X	
2 TO 4	Implement Electric Vehicle Initiative & Infrastructure	X		X	X	X	X
	Improve Recycling & Waste Diversion by 20% Each Year	X		X			X
	Urban Ag. & Sustainable FGTV Programming		X				X
4 TO 6	20% Reduction in Energy Usage by 2025	X		X	X		
	20% Reduction in Water Usage by 2025	X		X	X		
	Complete a 100% Renewable Energy Pilot Project	X		X	X		X
	Continuous Improvement in Water Quality vs. 2018	X	X	X	X		X
	Include Brownfield Restoration on Capital Projects	X	X	X			

ACTION PLAN FOR THE SIX KEY PERFORMANCE INDICATORS



Sustainability is climate change mitigation.

SMART ENERGY MANAGEMENT

Create a comprehensive energy plan that consists of policies and standards for energy conservation, efficiency, and control while reducing consumption yearly on electric costs.

The plan includes the following best practices for county-owned infrastructure:

- Seal and insulate building envelopes; accurately size heating, cooling and ventilation systems; specify energy efficient electrical and lighting systems; test and commission systems to ensure sustainable building operations.
- Retro-commission equipment/systems that have never been commissioned to maximize efficiency and lifespan.
- Track energy usage and savings on existing buildings and future projects.
- Establish an annual municipal utility reinvestment fund that represents dollar savings and/or energy rebates received from high-performance building upgrades.
- In 2020, begin performing EPA Phase I and Phase II environmental site assessments and energy audits on buildings greater than 15 years old and that have not been audited within the past seven years.
- Install metering and sub-metering equipment on all new and renovated capital projects.

Area of measurement:

Track energy consumption through utility expense management software. Track preventative maintenance measures through work order tracking software. Compare and contrast operation, work order, and new equipment costs.

Baseline:

2018 Total Building Energy Use: 654,094 MMBTU Million British Thermal Units

KPIs:

- Yearly electric consumption vs 2018: 163,468,905 kWh
- Yearly gas consumption vs 2018: 963,337 THERM
- Yearly total building GHG emissions 86,341 Metric Tons of Carbon Dioxide
- Number of audits completed each year



Sustainability is social equity & smart transit.

Transportation, air quality, and green spaces: reduction of overall vehicle emissions by Fulton County Government vehicles.

- Transition 20 percent of fleet mileage to hybrid or other alternative fuel technology by 2025.
- Increase the percentage of employees who are regularly using sustainable commute options to 20 percent by 2025 using employee surveys to measure the percentage increase.

- Encourage the use of current and upcoming alternate transit methods including carpooling, MARTA, bus rapid transit, light rail, cycling, and walking to get commuters through the last mile of their destination.
- Collaborate with the Department of Human Resources Management to provide incentives for sustainable commuting.
- Divert surplus food and supplies from county events to residents in need.
- Promote food self-sufficiency and food security for Fulton County residents through local partnerships and educational programs.

Area of Measurement:

Measure the number of gallons used to fuel the Fulton County fleet against the total mileage from 2018 and 2019 as a baseline. Measure employee's use of sustainable commute options through periodic surveys. Communicate with shuttle contractors to audit the number of riders.

Baselines:

2018 Gallons of fuel used for county vehicles: 540,705 Gals

KPIs:

- Yearly miles driven by gasoline-fueled vehicles: 13,951,353 miles in 2018
- Yearly miles driven by alternative fuel vehicles:
- Average number of employees using sustainable commuting options per month
- Number of surveys completed each year
- Active programs and partnerships related to sustainable food practices

Demonstration projects:

County residents have referenced "more organic foods" and "communities with clean air and water" as indicators of successfully addressing health concerns in Fulton County. Expanding organic urban farming will be critical in growing and selling locally produced products, which furthers equitable access to healthy, affordable food options for all county residents.

Strategy:

Fulton County will collaborate with the Citizens Commission on the Environment and regional agencies in seeking and establishing affordable, healthy food options within five miles of every resident. The County will participate in urban agriculture activities through the county extension office to promote local, healthy food opportunities. Target sources include community gardens, farmers' markets, or mini organic markets at major transit stops. Through urban farming and working with local organizations to increase the number of community gardens, Fulton County residents and businesses can access seasonal foods grown closer to home that support the local economy. Researching and mapping the locations of healthy local food options and their proximity to residents will be key to the success of this endeavor.





Sustainability is high-performance county buildings.

Green Buildings:

- Reduce or divert 20% of waste production by 2025 in county facilities.
- Identify composting, natural cleaners, providing eco-friendly options, material reuse, etc.
- Mitigate the use of polystyrene and plastic bag/plastic straws by vendors at county facilities, parks, and related events.
- Design and construct all capital projects over 10,000 square feet to meet high performance green building rating systems like LEED, Well or Energy Star.
- Use municipal utility reinvestment fund (using rebates from National Intergovernmental Purchasing Alliance contract) as a revolving financing mechanism for green purchasing requirements.

County Recycling Works

Over the past four years, the county's recycling efforts have seen exciting growth and participation by staff and visitors at county facilities, according to Rich Latham the county's current recycling and waste hauler. Latham's Home Sanitation Service provides waste hauler data showing the county's recycling and waste diversion history. Thanks to Latham's dual waste hauling trucks the county enjoys the clean separation of recyclable items from garbage items.

Recyclable items at county facilities:

- Aluminum and steel/tin cans
- Cardboard
- All paper products
- Plastics #1-7 (except Styrofoam)

Area of measurement:

Periodically perform waste audits for the primary county facilities with assistance from waste vendors. Identify materials that are difficult to recycle and manage through local partnerships. Measure green purchasing spending through reporting from major county vendors.

Baseline:

2018 amount of non-diverted waste produced at county facilities.

Percentage of 2018 eco-friendly products/materials/equipment/vehicles purchased: 16%

KPIs:

- Yearly percentage of diverted waste
- Percentage of Fulton County office supply spending allocated to eco-friendly products
- Number of projects using LEED, Green Globes or other third-party green building rating systems.

Create a water efficiency management system: reduce overall municipal potable water use and sewer needs 20 percent by 2025 through water conservation, efficiency, and reuse at county facilities.

The integrated approach into the comprehensive energy plan includes:

- Water-Smart initiatives: Leak survey and detection, evaporative water credits, diverted water meters.
- EPA WaterSense-labeled purchasing policies for plumbing fixtures, appliances, and products.
- Install a web-based irrigation monitoring and control system for open space sites.
- Move to landscape designs with at least 20 percent less water use for all new county facilities.
- Establish a municipal utility reinvestment fund (using previous utility cost savings) as a revolving financing mechanism for water infrastructure improvements.

Area of measurement:

Efficiently track the energy and water savings using utility expense management software.

Baselines:

Yearly total water use: 211,317 Kgal in 2018

KPIs:

- Water consumption per square foot by building
- 2018 water quality initiatives completed and their projected impact
- Number of audits completed each year

Demonstration projects:

All new Fulton County capital projects over-10,000 square feet will be designed and constructed to meet high performance green building standards. These projects are environmental and resource-efficient throughout their life-cycle from site development, construction, operation, maintenance, renovation, to deconstruction and recycling of reusable materials so that 95 percent of construction and demolition waste is diverted from local landfills.

#1 At least one new capital project must demonstrate capturing and reusing non-potable rainwater for toilet flushing and/or landscape irrigation. In 2019 Fulton County will begin a Composting Program. Pilots will start in different departments at the Fulton County Government Center expanding to other suitable buildings.

#2 High performance buildings will also integrate "internet of things" (IoT) architecture into their automation by creating a network of small cell data sensors that collect and exchange real-time information/intelligent services⁴ in partnership with law enforcement and supporting businesses. This initiative speaks to county residents referencing "immediate 911- response times" and "lower crime rates" as indicators of successfully addressing safety concerns in Fulton County.

Fulton County's building automation networks incorporate wireless metering and software components to manage energy or specific use demands. It includes a robust strategy for distributed generation, renewable energy sourcing and smart management in high performance buildings. It is in this way that IoT connects and improves resilience and sustainability.

Strategy:

Collaborate with internal and external green professionals to ensure high performance building standards are met. Also collaborate with the private sector to implement a smart microgrid demonstration project that displays technologies and establishes best practices for its deployment. Possible partnerships to include technology and telecommunications companies such as Intel, Panasonic, and Cisco to measure and report data.

⁴ Software-Defined Networking for internet of Things: A Survey, <https://ieeexplore.ieee.org/abstract/document/8017556>



Sustainability is education, outreach & green jobs training.

Education, innovation and workforce development:

- Foster partnerships between organizations within Fulton County Government promoting sustainable homes, workplaces and communities.
- The new Green Team will drive sustainability through county departmental leadership.

- Develop annual communications and outreach plans to ensure residents (individuals and businesses) are aware of related county programs and initiatives.
- Collaborate with Workforce Development to train county staff in sustainable programs through other organizations.
- Support sustainable development programs to continue attracting a talented workforce to Fulton County.
- Create programs and educate the public about the benefits of recycling and the detrimental effects of failure to recycle.

Area of measurement:

Use surveys to gauge participation and feedback and report the outcomes. Use website analytics and performance strategy management feedback to measure performance.

KPIs:

- Number of internal Fulton County sustainability projects/programs initiated and maintained.
- Number of county employees and residents that become certified as Green Professionals as established during yearly job performance evaluations.
- Number of residents that become certified as Green Professionals per year.

Demonstration projects:

County residents have referenced “increased funding to access skills training” and “a regional approach to homelessness, poverty, and addiction” as indicators of successfully addressing general self-sufficiency concerns in Fulton County. A priority for the Sustainability Department is to collaborate with the Office of Workforce Development to implement and enroll residents in Green Professional certification training, and other similar high-performance commercial construction workforce development-training programs. Additional goals include supporting homeless prevention and eradication programs within Fulton County that commit to preventing and ending homelessness.

Strategy:

Establish organizational partnerships and lobby to set aside funds for residents to enroll in various types of green building training. Simultaneously create straightforward and supportive paths to place these certified residents on county capital improvement projects upon program completion.

Work through the Department of Behavioral Health & Developmental Disabilities to build and strengthen partnerships between Fulton County cities and organizations identifying and supporting programs that address homelessness. Continue to identify ways to benchmark the number of homeless people who transition to permanent low-cost apartment housing by partnering with low-cost housing.



Sustainability is fostering partnerships for plan implementation.

This Sustainability Plan should create a path and framework for consistent collaboration with local governments, local universities, community and faith-based organizations, the private sector, and the public to take action that fosters a culture of resiliency.

Area of measurement:

Invest in the people and programs of Fulton County for a sustainable return on investment. Collaborate with Fulton County Commission on the Environment’s Environmental Award winners to educate the community on sustainable best practices. Benchmark the number of attendees and exhibitors participating in programs, workshops, and initiatives.

KPIs:

- Number of new and retained partnerships each year
- Specific initiatives related to or carried out through partnerships

Demonstration projects:

Foster the collective vision of sustainability for all entities of Fulton County by serving as a conduit for ideas, initiatives, and opportunities for organizations of all levels.

Strategy:

Seek, identify, and provide partnership opportunities creating on-the-job training, climate change mitigation practices, air quality education, and sustainability programs. Target partnerships and program opportunities with local organizations and agencies within the cities of Fulton County and neighboring communities.



Sustainability is budgetary appropriation for plan.

Budgetary analysis and grant funding will be critical for the success of the plan.

Area of measurement:

Fulton County Green Purchasing is using purchasing power in the most cost-effective, fair, and environmentally benign way; creating a healthier workplace. Green Purchasing includes implementing a sustainability requirement in the county's request for proposal templates as well as the standardization of environmentally friendly products across all departments.

KPIs:

- Percentage of "green" products/services purchased.
- Products purchased with recycled content from suppliers within 500 miles of Atlanta.
- Sustainability Grant and Rebate applications submitted.
- Sustainability Grant and Rebate applications awarded.
- Funds awarded by Utility Savings Reinvestment Fund and diverted to new projects.

Demonstration projects:

Transition at least 80% of all office and custodial supplies purchased and used annually to "eco-friendly" products. Transition to 100 percent recycled copier paper and 30 percent post-consumer content for all paper products.

Strategy:

Continuously research grant and funding opportunities to integrate industry-leading energy and sustainability products into Fulton County operations – sourcing these items locally as often as possible.

How Sustainability Supports the County's Strategic Plan

The table below demonstrates the overlap between the needs of the community and the planned services to be provided by the county.

HOW THE 2016-2019 STRATEGIC PLAN ALIGNS WITH THE 2019 - 2025 PLAN

2016-2019 STRATEGIC PLAN	CLIMATE CHANGE MITIGATION	SOCIAL EQUITY, & SMART TRANSIT	HIGH PERFORMANCE COUNTY BUILDINGS	EDUCATION OUTREACH & GREEN JOBS TRAINING	PARTNERSHIPS	FUNDING
2019-2025						
Increased Safety	Alert public to unsafe weather events using IoT	Access to safer transit and last mile of the way	Increase safety at High Performance county buildings with IoT	Educate the public on the benefits of IoT	Partner with other municipalities on a pilot project	Apply for grant to fund an IoT pilot project
Health & Wellness	Clean air & water quality	Healthier local food options	More green space	More public education	Expand partnerships	Apply for more grant funding
Self-Sufficiency	Public training on weather & disaster preparedness	More access to job training & placement	New opportunities for placement on county capital projects		Partner to establish more job training and placement	Apply for more grant funding
More Economic Opportunities		More access to smart transit and last mile of the destination		More access to skilled training and jobs	Work on a regional solution to homelessness	
More Cultural Enrichment				Series of seminars on "Living Sustainability"		
Trusting County Government	Reduce carbon/ water footprints at county facilities by 20% by 2025		Build/renovate only high-performance green county buildings by 2025	Educate and train county's O+M staff using GPRO to maintain LEED buildings		Budgetary appropriations and grants to fund SP+R

Proposed Demonstrations and Pilot Projects by 2025 for the Six Key Performance Indicators

1. Sustainability is climate change mitigation

- Budget allocations to retrofit buildings that use the most energy. Beginning in 2020, Level I and Level II energy audits should be performed on all buildings that are 15 years old or more and that have not been audited within seven years.
- Install metering and sub-metering equipment on all new and renovated capital projects.

2. Sustainability is social equity & smart transit

- Produce a “sustainable living” show by FGTV featuring urban farming or farm-to-table produce that is prepared by a Fulton County family along with a variety of other sustainability topics. Invite the District Commissioner and FCCCE members for that district.
- Install alternative fuel source stations at two locations on county projects. In 2020, establish a “Drive Electric Vehicle” initiative with new EV charging stations at libraries and the North and South Fulton Service Centers.

3. Sustainability is high-performance county infrastructures

- Identify possible pilot sites/ facilities and demonstrate net-zero on-site renewable energy.
- Kick off the Fulton County composting program. Pilots will start in different departments at the Fulton County Government Center and expand out to the senior centers and other appropriate buildings prioritized by estimated compost volume.
- Capture and reuse non-potable rainwater for toilet flushing or for landscape irrigation at a county capital project.
- Integrate green product specifications in the upcoming bid solicitation for custodial cleaning products.
- Implement a “Single-Use Plastics Mitigation Policy” at county facilities. Addressing the single-use plastics problem reflects the elective pursuit of wellness based on the evidenced harsh environmental effects of plastic and polystyrene products. While they provide some convenience such as keeping beverages hot or serving as takeout containers, these materials are made from fossil fuels and synthetic chemicals, like polystyrene, that are not biodegradable. Polystyrene foam absorbs dangerous chemicals from other contaminants, putting humans and wildlife at risk.

4. Sustainability is education, outreach & green jobs training

- Host a series of presentations and seminars for residents to learn about the holistic local food movement, indoor air quality, and green jobs. Funding will occur through partnerships.
- Attempt to score an innovation in design credit using LEED Pilot Credit 81 to train, certify and place trade workers and operations and maintenance staff who build, renovate and maintain projects registered under the LEED rating system.
- Partner with the Office of Workforce Development leadership to launch GPRO, an on-going national green building training program created by the Urban Green Council, linking sustainability with trade-specific construction knowledge for those who build, renovate and maintain buildings. Certify 50 participants per year. The cost is approximately \$350 per person.
- Applicants must pass a 50-question exam to earn certification and use the GPRO designation. Those who become GPRO certified qualify to work on green construction projects like the Fulton County Public Library System’s Phase II Capital Improvement Program in which 22 existing libraries are being renovated.

5. Sustainability is fostering partnerships

- Develop green meeting guidelines for county events that promote recycling and composting opportunities.
- Install a “smart microgrid,” a network of cameras backed by facial recognition software, as a crime deterrent that supports critical county facilities and partnering cities.

6. Sustainability is budgetary appropriation

- Implement environmentally friendly product purchasing policy including a goal of a minimum of 30 percent recycled content in paper products by 2025.

2019-2025 Pilot Programs for the Six Key Performance Indicators

2016-2019 STRATEGIC PLAN	CLIMATE CHANGE MITIGATION	SOCIAL EQUITY & SMART TRANSIT	HIGH PERFORMANCE COUNTY BUILDINGS	EDUCATION OUTREACH & GREEN JOBS TRAINING	PARTNERSHIPS	FUNDING
2019 - 2025						
Short-Term - 2022						
Improve Energy Efficiency	Conduct Level I & II Energy Audits for buildings 15+ years old		Metering and sub-metering installed on new capital projects		GEFA Renewable Energy Solar Pilot Project for Cleveland Ave Library	
Improve Water Efficiency & Water Quality						
Education, Outreach & Job Training		FGTV healthy cooking shows using farm-to-table produce		Implement Green Jobs Training on capital projects	Implement a County Green Housekeeping & Pest Control Policy	
Misc. Recycling & Reuse Projects			Capture rainwater reuse for irrigation on a capital project		Implement a polystyrene and plastic container food ban at county events	
Alternative Fuel Vehicles/Transit			Install new EV charging stations at N & S Service Centers			
Mid-Term – 2024						
Partnerships & Grant Opportunities					Apply for grants to fund pilot projects	
Smart Buildings & IoT pilot			Install a smart microgrid (IoT) on a capital project			
Purchasing Policy			Implement a Green Purchasing Policy			
Refresh Greenspace			Restore & add green space on all capital projects			
Long-Term – 2025+						
Net-Zero Renewable Energy Plan			Feasibility Study to access net zero strategy on capital projects by 2050			

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